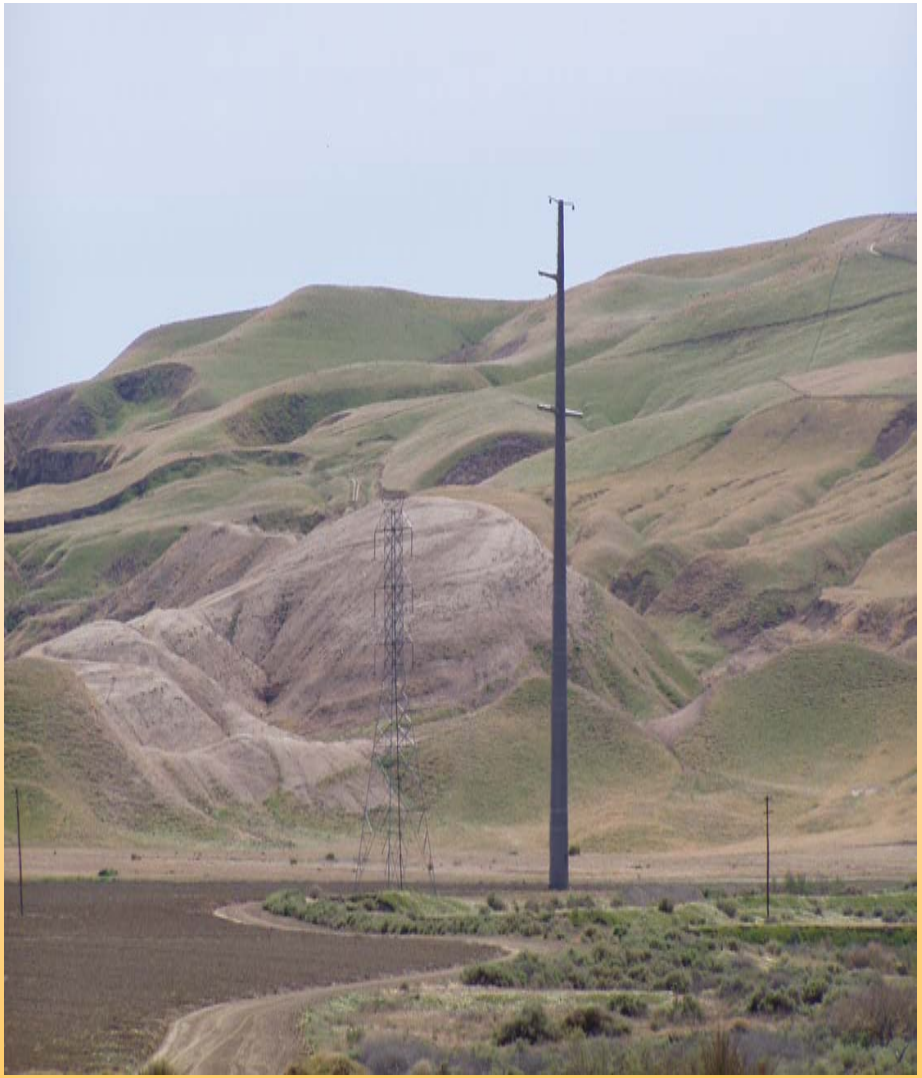

The California ISO's Perspective on California's Short Term Transmission Outlook

Integrated Energy Policy Report 2004 Update Committee Workshop
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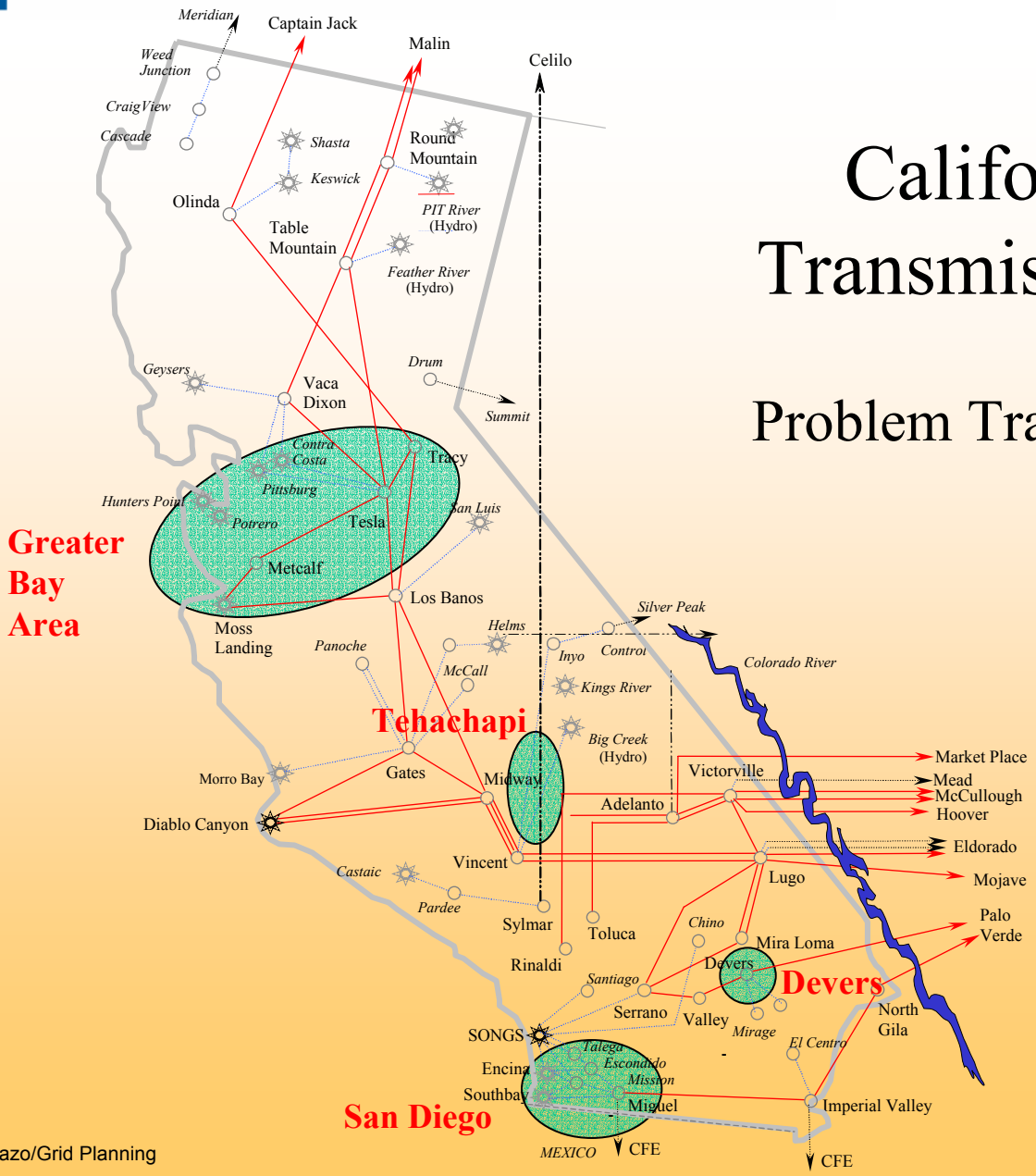
California EHV Transmission System

Problem Transmission Areas



ISO Transmission Expansion Plans

- For 2003
  - ISO has approved 21 PTO projects
  - Total capital investment ~ $700M
- Since ISO Startup
  - ISO has approved 271 PTO projects
  - Total capital investment ~ $2.3B

ISO Grid Planning Process

ISO Process Purposes	1998	2004
• Interconnecting generation or load • Protecting or enhancing reliability • Ensuring efficient use of the grid • Enhancing operating flexibility • Reducing or eliminating congestion where economic • Ratepayers benefit	• Five Year Plans • RMR Studies • Generation Interconnections • Deterministic • Reliability Only	• Five Year Plans • RMR Studies • Generation Interconnections (FERC Filing) • Still Deterministic • ***Probabilistic Planning*** • ***Economic Studies (London Economics)*** • ***Deliverability Studies*** • ***Subregional Planning***

Summary

- The ISO works closely with the FERC, the CPUC, and the CEC, and many other stakeholders, when planning the grid
- The ISO has a comprehensive grid planning process that coordinates with the entire western interconnection through WECC and SSG-WI
- Data and assumptions used in the planning process come from a variety of sources including the CPUC, the CEC, the WECC, and the SSG-WI
- Reliability standards, developed primarily by NERC, guide the planning of the grid

How Are We Doing?

- The ten-year expansion planning process is working well
- Generation interconnection process is undergoing change to be in compliance with FERC Order 2003
- ISO's RMR process is undergoing change to reflect current times
- Transmission Economic Assessment Methodology (TEAM) effort is in progress
- Generation "Deliverability" methodology is under development
- ISO is actively participating in ongoing subregional planning efforts

Areas For Improvement

- Coordination of ISO grid planning process
  - Resource procurement process (CPUC)
  - Renewable procurement process (CPUC)
  - Bus level load forecasting (CEC)
  - Generation plans - new and retirement (CEC)
- State regulatory approval processes
  - Responsibility
  - Streamlining process

Consequences of Inaction

- Failure to meet mandatory reliability planning and operating standards
- Insufficient transmission capacity to serve load
  - Load shedding
  - Generation dropping
- Increased ratepayer costs
  - Uneconomic dispatch
  - Equipment maintenance
  - “Just in Time” thinking
  - Value of service